Abstract of the Disclosure

An improved system for screening a multiple of candidate therapeutic or chemotherapeutic agents for efficacy as to a specific patient, in which a tissue sample from the patient is harvested, cultured and separately exposed to a plurality of treatments and/or therapeutic agents for the purpose of objectively identifying the best treatment or agent for the particular patient. The system includes the initial preparation of cohesive multicellular particulates of the tissue sample, rather than enzymatically dissociated cell suspensions or preparations, for initial tissue culture monolayer preparation. Practical monolayers of cells may thus be formed to enable meaningful screening of a plurality of treatments and/or agents. By subjecting uniform samples of cells to a wide variety of active agents (and concentrations thereof), the most promising agent and concentration for treatment of a particular patient can be determined. For assays concerning cancer treatment, a two-stage evaluation is contemplated in which both acute cytotoxic and longer term inhibitory effect of a given anti-cancer agent are investigated.